

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION**

PARITY NETWORKS LLC,

*Plaintiff,*

v.

ALCATEL-LUCENT USA, INC.,

*Defendant.*

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CIVIL ACTION NO. 6:16-cv-01367

**JURY TRIAL DEMANDED**

**FIRST AMENDED COMPLAINT**

Plaintiff Parity Networks LLC (“Plaintiff” or “Parity Networks”), by and through its attorneys, for its First Amended Complaint against Alcatel-Lucent USA, Inc. (“Defendant” or “Alcatel-Lucent”), and demanding trial by jury, hereby alleges as follows:

**I. NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 271, *et seq.*, to enjoin and obtain damages resulting from Defendant’s unauthorized use, sale, and offer to sell in the United States of products, methods, processes, services and/or systems that infringe Parity Networks’ United States patents, as described herein.

2. Parity filed its Original Complaint against Nokia Solutions and Networks US, LLC (“NSNU”) on December 9, 2016. Parity was subsequently notified by counsel for NSNU that the proper party to the litigation is Alcatel-Lucent. Both NSNU and Alcatel-Lucent are owned indirectly by Nokia Corporation.

3. Alcatel-Lucent manufactures, provides, uses, sells, offers for sale, imports, and/or distributes infringing products and services; and encourages others to use its products and services in an infringing manner, including their customers, as set forth herein.

4. Parity Networks seeks past and future damages and prejudgment and post judgment interest for Alcatel-Lucent's past infringement of the Patents-in-Suit, as defined below.

## **II. PARTIES**

5. Plaintiff Parity Networks is a limited liability company organized and existing under the laws of the State of Texas. Parity Networks' registered agent for service of process in Texas is InCorp Services, Inc., 815 Brazos Street, Suite 500, Austin, Texas 78701.

6. On information and belief, Defendant Alcatel-Lucent is a corporation organized under the laws of Delaware, having a principal place of business at 600 Mountain Avenue, Murray Hill, New Jersey 07974. Alcatel-Lucent's registered agent for service of process in Texas is Prentice Hall Corporation System, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

## **III. JURISDICTION AND VENUE**

7. This is an action for patent infringement which arises under the Patent Laws of the United States, in particular, 35 U.S.C. §§ 271, 281, 283, 284 and 285.

8. This Court has exclusive jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

9. On information and belief, venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b) because Defendant has transacted business in this district, and has committed and/or induced acts of patent infringement in this district.

10. On information and belief, Defendant Alcatel-Lucent is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the

infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this Judicial District.

#### **IV. FACTUAL ALLEGATIONS**

##### **PATENTS-IN-SUIT**

11. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,252,848 (the “848 Patent”), entitled “System Performance in a Data Network Through Queue Management Based on Ingress Rate Monitoring,” issued on June 26, 2001.

12. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,553,005 (the “005 patent”), entitled “Method and Apparatus for Load Apportionment among Physical Interfaces in Data Routers,” issued on April 22, 2003.

13. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,738,378 (the “378 Patent”), entitled “Method and Apparatus for Intelligent Determination of Data Packets Destined to a Central Processing Unit of a Router or Server on a Data Packet Network,” issued on May 18, 2004.

14. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 6,763,394 (the “394 Patent”), entitled “Virtual Egress Packet Classification at Ingress,” issued on July 13, 2004.

15. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 7,002,958 (the “958 Patent”), entitled “Method for Load-Balancing With FIFO Guarantees in Multipath Networks,” issued on February 21, 2006.

16. Parity Networks is the owner of all right, title and interest in and to U.S. Patent No. 7,107,352 (the “352 Patent”), entitled “Virtual Egress Packet Classification at Ingress,” issued on September 12, 2006.

17. Together, the foregoing patents are referred to herein as the “Patents-in-Suit.” Parity Networks is the assignee of the Patents-in-Suit, and has all rights to sue for infringement and collect past and future damages for the infringement thereof.

#### DEFENDANT’S ACTS

18. Alcatel-Lucent provides software and services directed to detection, analysis and monitoring of data flow in a data network environment, including Nokia branded products.

19. For example, Alcatel-Lucent provides IP routing solutions that provide high-performance networking for cloud, data center, and branch office applications. The Nokia 7750 SR-Series routers provide traffic management and queuing. Filters are provided to drop or accept packets, and/or allow dedicated hardware shaping queues for traffic directed to control processors.

20. In the Nokia 7750 SR-Series routers, individual ports note header field combinations and values and egress ports for transmission for received packets. A lookup table compares headers with rules associated with the egress ports and field values, and the system returns a rule determination for the packet. An access control list (“ACL”) provides filtering/dropping of packets based on various criteria including the ingress and/or egress port.

21. The Alcatel-Lucent routers implement Quality of Service (“QoS”) mechanisms. In that regard, the input ports receive packets from a plurality of flows or services. Packets are directed to output queues upon application of one or more policies.

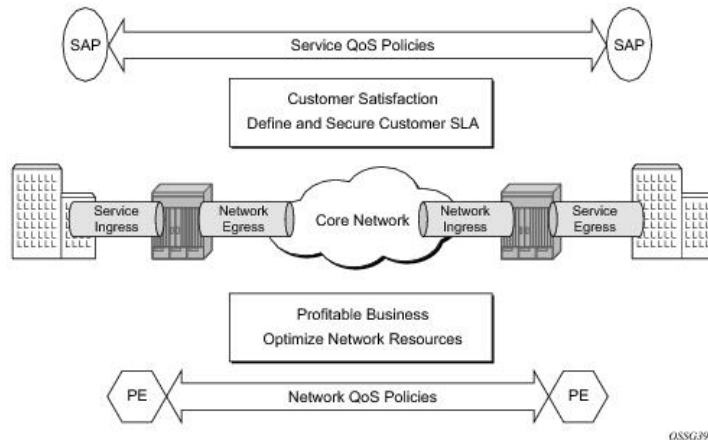
### **QoS Overview**

7750 SR routers are designed with Quality of Service (QoS) mechanisms on both ingress and egress to support multiple customers and multiple services per physical interface. The 7750 SR has extensive and flexible capabilities to classify, police, shape and mark traffic.

[https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9300770801\\_V1\\_7750\\_SR\\_OS\\_QUALITY\\_OF.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9300770801_V1_7750_SR_OS_QUALITY_OF.pdf).

22. QoS is implemented by Alcatel-Lucent at multiple points in the network, as shown below.

The network administrator needs to make sure that QoS is configured correctly at each point using the appropriate QoS policies (Figure 256).



[https://infoproducts.alcatel-lucent.com/html/0\\_add-h-f/93-0267-](https://infoproducts.alcatel-lucent.com/html/0_add-h-f/93-0267-)

[HTML/7X50\\_Advanced\\_Configuration\\_Guide/QoS\\_arch.html](HTML/7X50_Advanced_Configuration_Guide/QoS_arch.html).

Defendant tests the network configurations that it instructs its customers to implement. *See, e.g., id.* (“The information in this section is applicable to all of the Alcatel-Lucent 7x50 platforms and is focused on the FP2 chipset, which is used in the IOM3-XP/IMM and in the 7750 SR-c12/4. The configuration was tested on release 9.0R3.”)

23. On information of belief, Defendant Alcatel-Lucent also implements contractual protections in the form of license and use restrictions with its customers to preclude the unauthorized reproduction, distribution and modification of its software. Moreover, on information and belief, Defendant Alcatel-Lucent implements technical precautions to attempt to thwart customers who would circumvent the intended operation of Alcatel-Lucent’s products.

24. During the course of its own prosecution activities, Alcatel-Lucent and its affiliates (collectively, the “Related Parties”) have been apprised of at least some of the Patents-in-Suit.

25. The Related Parties were made aware of the '848 Patent by the Examiner of the U.S. Patent & Trademark Office ("USPTO"), or raised it as relevant prior art in connection with their own applications giving rise to: (1) U.S. Patent Nos. 6,839,321; 7,092,358; 7,277,388; and 7,636,307; (2) U.S. Patent Publication Nos. 20040179473A1; and 20050002377A1; and (3) European Patent EP1458154A2.

26. The Related Parties were also made aware of the '378 Patent by the Examiner of the U.S. Patent & Trademark Office ("USPTO") in connection with their own application giving rise to U.S. Patent Publication No. 20070058649A1.

27. The Related Parties were also made aware of the '352 Patent by the Examiner of the U.S. Patent & Trademark Office ("USPTO") in connection with their own application giving rise to U.S. Patent No. 7,512,122.

## **V. COUNTS OF PATENT INFRINGEMENT**

### **COUNT ONE INFRINGEMENT OF U.S. PATENT NO. 6,252,848**

28. Parity Networks incorporates by reference its allegations in Paragraphs 1-27 as if fully restated in this paragraph.

29. Parity Networks is the assignee and owner of all right, title and interest to the '848 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

30. On information and belief, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 15 of the '848 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '848 Patent. Defendant Alcatel-Lucent is thus liable for

direct infringement of the '848 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the Service Router Operating System ("SROS"), including as implemented in the 7750 SR, which includes multiple ports with output queues and wherein the ingress ports are configured to receive packets from multiple ingress flows.

31. On information and belief, at least since the filing of the Original Complaint, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 15 of the '848 Patent, including actively inducing infringement of the '848 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Alcatel-Lucent knows or should know infringe one or more claims of the '848 Patent. Alcatel-Lucent instructs its customers to make and use the patented inventions of the '848 Patent by operating Alcatel-Lucent's products in accordance with Alcatel-Lucent's specifications. Alcatel-Lucent specifically intends its customers to infringe by implementing its operating system to manage QoS based on a traffic classifier to classify, police, shape and mark traffic in an infringing manner.

32. As a result of Alcatel-Lucent's infringement of the '848 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT TWO  
INFRINGEMENT OF U.S. PATENT NO. 6,553,005

33. Parity Networks incorporates by reference its allegations in Paragraphs 1-32 as if fully restated in this paragraph.

34. Parity Networks is the assignee and owner of all right, title and interest to the '005 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

35. On information and belief, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '005 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '005 Patent. Defendant Alcatel-Lucent is thus liable for direct infringement of the '005 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the 7750 SR, which includes multiple ports with output queues and wherein the ingress ports are configured to receive packets from multiple ingress flows. The 7750 SR routes packets having a plurality of candidate egress ports, including identifying a set of egress ports based on a source IP address such as those defined by a link aggregation group ("LAG").

36. On information and belief, at least since the filing of the Original Complaint, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '005 Patent, including actively inducing infringement of the '005 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Alcatel-Lucent knows or should know infringe one or more claims of the '005 Patent. Alcatel-Lucent instructs its customers to make and use the patented inventions of the '005 patent by operating Alcatel-Lucent's products in accordance with Alcatel-Lucent's specifications. Alcatel-Lucent specifically intends its customers to infringe by



implementing its routers to choose a set of egress ports in an infringing manner, as set forth above.

37. As a result of Alcatel-Lucent's infringement of the '005 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT THREE  
INFRINGEMENT OF U.S. PATENT NO. 6,738,378

38. Parity Networks incorporates by reference its allegations in Paragraphs 1-37 as if fully restated in this paragraph.

39. Parity Networks is the assignee and owner of all right, title and interest to the '378 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

40. On information and belief, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '378 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '378 Patent. Defendant Alcatel-Lucent is thus liable for direct infringement of the '378 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the Service Router Operating System ("SROS"), including as implemented in the 7750 SR, which includes an input/output module ("IOM") which includes a packet processor and a control packet module ("CPM").

41. On information and belief, at least since the filing of the Original Complaint, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '378 Patent, including actively inducing

infringement of the '378 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Alcatel-Lucent knows or should know infringe one or more claims of the '378 Patent. Alcatel-Lucent instructs its customers to make and use the patented inventions of the '378 Patent by operating Alcatel-Lucent's products in accordance with Alcatel-Lucent's specifications. Alcatel-Lucent specifically intends its customers to infringe by implementing its routers to sort packets into forwarding classes, including as associated with DiffServ class names per network QoS policies.

42. As a result of Alcatel-Lucent's infringement of the '378 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FOUR  
INFRINGEMENT OF U.S. PATENT NO. 6,763,394

43. Parity Networks incorporates by reference its allegations in Paragraphs 1-42 as if fully restated in this paragraph.

44. Parity Networks is the assignee and owner of all right, title and interest to the '394 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

45. On information and belief, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 13 of the '394 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '394 Patent. Defendant Alcatel-Lucent is thus liable for direct infringement of the '394 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing

products include the Service Router Operating System (“SROS”), including as implemented in the 7750 SR, which includes ACLs for filtering and dropping of packets based on various criteria including the egress port.

46. On information and belief, at least since the filing of the Original Complaint, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 13 of the ’394 Patent, including actively inducing infringement of the ’394 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Alcatel-Lucent knows or should know infringe one or more claims of the ’394 Patent. Alcatel-Lucent instructs its customers to make and use the patented inventions of the ’394 Patent by operating Alcatel-Lucent’s products in accordance with Alcatel-Lucent’s specifications. Alcatel-Lucent specifically intends its customers to infringe by implementing its routers perform traffic policing based on a traffic classifier in an infringing manner, as set forth above.

47. As a result of Alcatel-Lucent’s infringement of the ’394 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FIVE  
INFRINGEMENT OF U.S. PATENT NO. 7,002,958

48. Parity Networks incorporates by reference its allegations in Paragraphs 1-47 as if fully restated in this paragraph.

49. Parity Networks is the assignee and owner of all right, title and interest to the ’958 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

50. On information and belief, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '958 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '958 Patent. Defendant Alcatel-Lucent is thus liable for direct infringement of the '958 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the 7750 SR, which supports Multipath Label Switching (MPLS) Label Edge Router (LER) and Label Switching Router (LSR) functions, and allocates labels to packets to establish a label switched path (LSP).

51. On information and belief, at least since the filing of the Original Complaint, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '958 Patent, including actively inducing infringement of the '958 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Alcatel-Lucent knows or should know infringe one or more claims of the '958 Patent. Alcatel-Lucent instructs its customers to make and use the patented inventions of the '958 Patent by operating Alcatel-Lucent's products in accordance with Alcatel-Lucent's specifications. Alcatel-Lucent specifically intends its customers to infringe by implementing its routers perform MPLS in an infringing manner, as set forth above.

52. As a result of Alcatel-Lucent's infringement of the '958 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT SIX  
INFRINGEMENT OF U.S. PATENT NO. 7,107,352

53. Parity Networks incorporates by reference its allegations in Paragraphs 1-52 as if fully restated in this paragraph.

54. Parity Networks is the assignee and owner of all right, title and interest to the '352 Patent. Parity Networks has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

55. On information and belief, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently directly infringing at least claim 1 of the '352 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '352 Patent. Defendant Alcatel-Lucent is thus liable for direct infringement of the '352 Patent pursuant to 35 U.S.C. § 271(a). Exemplary infringing products include the 7750 SR, which incorporates ACLs for filtering and dropping of packets based on various criteria including the egress port.

56. On information and belief, at least since the filing of the Original Complaint, Defendant Alcatel-Lucent, without authorization or license from Parity Networks, has been and is presently indirectly infringing at least claim 1 of the '352 Patent, including actively inducing infringement of the '352 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Alcatel-Lucent knows or should know infringe one or more claims of the '352 Patent. Alcatel-Lucent instructs its customers to make and use the patented inventions of the '352 Patent by operating Alcatel-Lucent's products in accordance with Alcatel-Lucent's specifications. Alcatel-Lucent specifically intends its customers to infringe by

implementing its routers to perform traffic policing based on a traffic classifier in an infringing manner, as set forth above.

57. As a result of Alcatel-Lucent's infringement of the '352 Patent, Parity Networks has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

## **VI. WILLFUL INFRINGEMENT**

58. Plaintiff alleges upon information and belief that, in connection with the knowledge it gained in connection with its own prosecution activities, Defendant has been made aware of at least the '848 Patent, the '378 Patent and the '352 Patent.

59. Notwithstanding this knowledge, Defendant has knowingly or with reckless disregard willfully infringed one or more of the foregoing Patents-in-Suit. Defendant has thus had actual notice of infringement of one or more of the Patents-in-Suit and acted despite an objectively high likelihood that its actions constituted infringement of Plaintiff's valid patent rights.

60. This objective risk was either known or so obvious that it should have been known to Defendant. Accordingly, Plaintiff seeks enhanced damages pursuant to 35 U.S.C. § 284.

## **VII. JURY DEMAND**

61. Plaintiff Parity Networks demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to FED. R. CIV. P. 38.

## **VIII. PRAYER FOR RELIEF**

WHEREFORE, Parity Networks prays for judgment and seeks relief against Defendant as follows:

- A. That the Court determine that one or more claims of the Patents-in-Suit is infringed by Defendant Alcatel-Lucent, either literally or under the doctrine of equivalents;
- B. That the Court award damages adequate to compensate Parity Networks for the patent infringement that has occurred, together with prejudgment and post-judgment interest and costs, and an ongoing royalty for continued infringement;
- C. That the Court permanently enjoin Defendant pursuant to 35 U.S.C. § 283;
- D. That the Court award enhanced damages with respect to the '848 Patent, the '378 Patent and the '352 Patent pursuant to 35 U.S.C. §284; and
- E. That the Court award such other relief to Parity Networks as the Court deems just and proper.

DATED: February 20, 2017

Respectfully submitted,

/s/ Andrew G. DiNovo

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*Counsel for Plaintiff Parity Networks LLC*

**CERTIFICATE OF SERVICE**

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who are deemed to have consented to electronic service. Local Rule CV-5(a)(3)(A). Pursuant to FED. R. CIV. P. 5(d) and Local Rule CV-5(d) and (e), all other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of the foregoing by email, on this the 20<sup>th</sup> day of February, 2017.

/s/ Andrew G. DiNovo  
Andrew G. DiNovo